

ABSTRACT OF THE DISCLOSURE

There is provided not only a radio frequency power amplifier using an SiGe HBT subject to a little amplification distortion, but also a communication system
5 using the same. A conventional radio frequency power amplifier provides base bias paths of transistors Q_1 through Q_N (SiGe HBT) with bias resistors R_{11} through R_{1N} having resistance values three to five times higher than those of a ballast resistor attached to each transistor's base. A
10 coil L_B is provided in parallel with the bias resistor as a means for compensating a voltage drop due to direct current component I_{DC} flowing through the bias resistor. Addition of the bias resistor suppresses non-linearity of low-frequency variations in an output current. Addition of
15 the coil compensates for voltage drop. Accordingly, the maximum linear output power can be improved. As a result, it is possible to provide the power amplifier subject to a little amplification distortion within a wide output range.